

TEMPERATE REGIONS

1. WARM TEMPERATE REGIONS

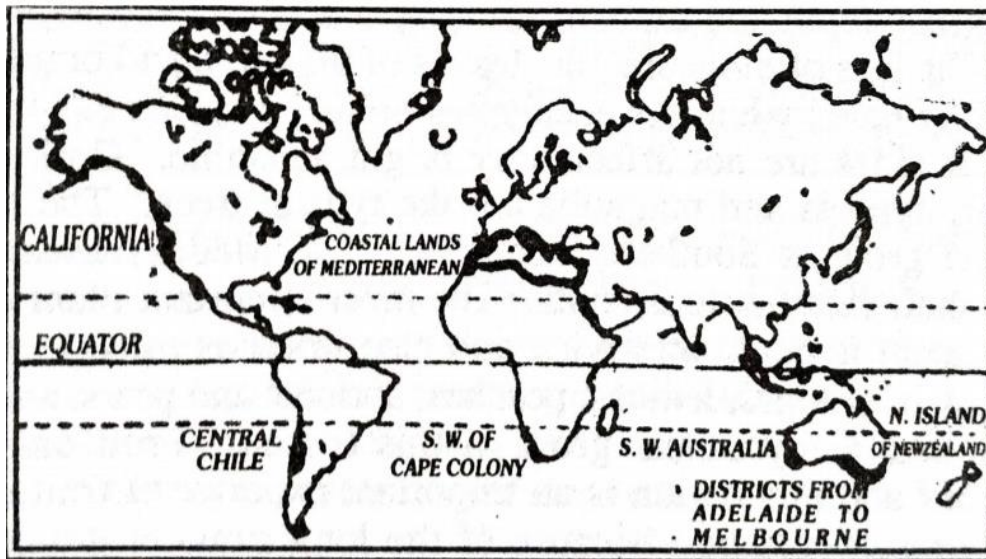
(A) WARM TEMPERATE WEST MARGINAL REGION OR MEDITERRANEAN TYPE OR DRY SUMMER SUBTROPICS

Situation and Extent

This region is situated between the **latitudes 30° and 40° both** to the north and south of the equator and includes only the lands lying on the western margins of the continents.

Most of the countries having this type of climate are situated around the Mediterranean Sea. Hence the name '**Mediterranean Type**, of climate. Dry Summer Subtropics and the term Mediterranean are used interchangeably.

- This region includes Mediterranean lands comprising Spain, Portugal, Southern France, Italy, Greece, Yugoslavia, Albania, the Islands of Sicily and Cyprus in Southern Europe ;
- Western Turkey in Asia ; and
- Morocco, Algeria and Tunisia in North Africa, and
- Cape Province in South Africa;
- the Pacific Seaboard of North and South America, viz., Southern California in North America and Central Chile in South America ;
- south-western and southern coast of Australia ;
- Victoria and the Northern island of New Zealand.



Mediterranean Region

Climate

- The Warm Temperate West Marginal Region or the Dry Summer Subtropics are transitional areas between arid and humid climates ;
- the equatorward margins of the regions are covered by deserts and the pole-ward sides have humid lands.
- Winter is season of rain; aridity or dryness prevails during summer.

The following are the main climatic characteristics of Mediterranean regions :

(1) The region is associated with **winter rainfall and drought in summer**, this is so because the winds of this region are **wet westerlies** from the ocean in winter and **dry trade winds** from the land in summer.

This is due to the swinging of the pressure belts. In summers, as the Sun is in the northern hemisphere, the pressure belts swing towards north. As a result, the Mediterranean region comes under the influence of the desert climate and dry trade winds blow from the interior of the countries. Hence, summers are dry and hot. In winters, on the other hand, the pressure belts swing towards the equator and the Mediterranean lands come under the influence of cool temperate cyclonic climate and westerlies. Hence, winters are cool and moist.

(2) **The rainfall is moderate, about 50 cm. annually.** However, the areas lying on the Mediterranean coast enjoy considerable rainfall, varying between 25 cm. and 100 cm. One area, around Trieste, has over 200 cm. rainfall annually.

(3) The summers are hot, with temperatures **over 21°C and over 27°C in areas** away from the sea, as in Central South Italy. The winters are warm having an average temperature of about **10°C.**

Thus, Mediterranean lands have **mild rainy winters** and **warm to hot dry summers.**

Vegetation

- The vegetation of this region may be classed as **broad-leaved ever-green forests,** woods and shrubs.
- The vegetation consists chiefly of trees which are provided by nature with special devices to protect themselves against the summer drought.
- The **vine plant** has long roots which enable it to obtain moisture from great depth, the trunk of the cork-oak is covered with thick bark which prevents the loss of moisture ; the leaves of the olive and orange trees are covered with silky hair ; while the eucalyptus holds its leaves edgewise to the Sun so that their sides are not affected by bright sunshine.
- Cork oak, olive, mulberry, cedar, cypress and magnolia are the typical trees.
- The eucalyptus, jarrah and Karri grow in Southern Australia.
- The Mediterranean trees are **remarkable for their fine luscious fruits.** The most important plant is the vine, whose fruit (grapes) is made into wine and also dried as raisins.
- Other well-known fruits such as oranges, lemons, peaches, apricots and pears, and nuts such as the almond, and many others grow in this region.
- **Fruit canning** is an important industry and this region is an important exporter of fruits.
- There is, however, **little grass vegetation** because of the long summer drought and the absence of surface moisture.

Animal Life

- ✓ Pigs, cattle, horny sheep, asses, monkeys and goats are the chief animals found in this region.
- ✓ Sheep and goats can be fed on small grasses and thus are reared in large numbers. This region is, therefore, a **big producer of wool**.
- ✓ The lack of pastureland has checked the growth of cattle rearing industry.
- ✓ The kangaroo and the hare are found in Australia.
- ✓ The region also abounds in birds of beautiful colours which are found in large numbers on the flowering plants and fruit trees.

Human Life and Economic Development

- ✓ The Mediterranean climate is highly congenial to human inhabitation and as such the Mediterranean lands are **densely populated**.
- ✓ Agriculture and fruit farming are the main occupations.
- ✓ Wheat is the principal crop, and barley is grown in drier and poorer regions.
- ✓ In damp or irrigated areas, rice, cotton, tobacco, sugarcane and dates can be grown.
- ✓ Fruit farming is another important occupation.
- ✓ The winter rain climate is particularly suitable for the cultivation of a variety of citrus fruits like grapes, lemons, oranges, figs, olives, almonds, apricots, peaches and pears.
- ✓ Grapes are the most important and the most widely grown fruit. It is made into wine or dried as raisins.
- ✓ **World's best wines** come from this region. The champagne of France, Port of Portugal and Sherry of Spain are world famous.
- ✓ Olive-oil, perfumes, scents and essences, perfumed soap and other toilet products are manufactured on a large scale.
- ✓ Sericulture is another important occupation, particularly in France and Italy. Lyons in France and Milan in Italy are important silk manufacturing centres. Fishing is done along the coast.
- ✓ Though predominantly agricultural in character, some parts of this region have also developed manufacturing industries.
- ✓ France and Italy have developed silk manufacturing, iron and steel and the shipbuilding industries.
- ✓ Fruit-canning and fruit-tinning industries are found everywhere. Southern Spain and California are also industrialised.

Mineral resources

Mining is also an important activity. The important minerals found in this region are ;

- ✓ bauxite in France and Yugoslavia ;
- ✓ mercury in Italy ;
- ✓ iron-ore and phosphates in Algeria ;
- ✓ chromium, coal, molybdenum, lead and zinc in Turkey ; and
- ✓ copper in Spain.
- ✓ Mediterranean lands are usually deficient in coal and oil which has retarded their industrial development.

The Mediterranean lands are termed as a region of increment. Nature here is bountiful and a little effort is sufficient to earn a livelihood. People have abundant of leisure and as such this region has harboured many of the great civilisations of the world—including Greek and Roman. People here are highly civilised.

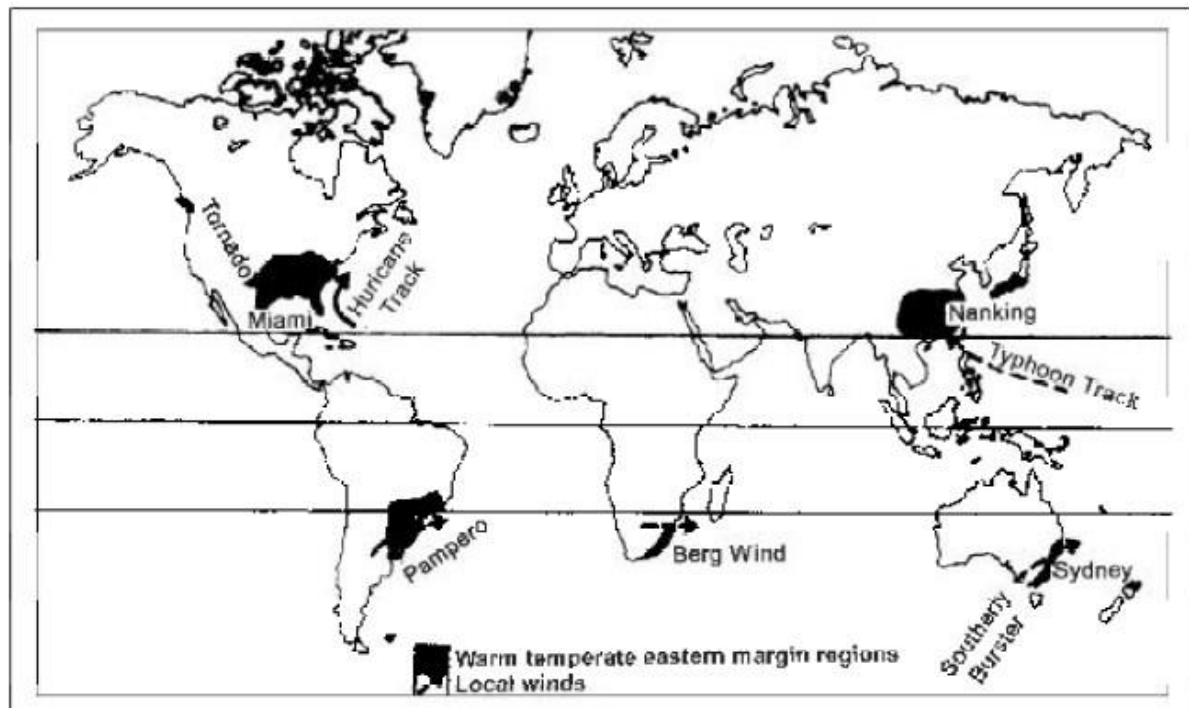
(B) WARM TEMPERATE EAST MARGINAL REGION OR CHINA TYPE

Situation and Extent

The region is situated between the **latitudes 30° and 40° both to the north and south** of the equator and includes the lands lying on the **eastern margins of the countries**. It includes

- North and Central China, Western Korea and Southern Japan in Asia ;
- the Gulf States of the U.S.A. (*Iowa, Missouri, Arkansas, Eastern Texas and Gulf Coast*) in North America ;
- Southern Brazil, Uruguay and Paraguay in South America ;
- eastern seaboard of New South Wales and Southern Queensland in Australia ; and
- Natal in South Africa.

Warm Temperate Eastern Margin Climatic Region or China Type



Climate

- **Hot summers and very cold winters** are the peculiar climatic features of these areas.
- Rainfall occurs **mainly in summers** and winters are dry. This is so because the trade winds which cause rainfall blow from sea towards lands only during summer. The rainfall is fairly heavy though not evenly distributed.
- **Typhoons** occur in late summer.

- The climatic conditions are, therefore, very much similar to those of the monsoon region and hence this region is sometimes called the ***"Temperate Monsoon Region"***.

Vegetation

- ✓ The typical vegetation of this region is **warm temperate forests** with scrublands.
- ✓ The important trees are yellow pines, walnut, chestnut, beech, magnolia and oak. Cedar, cypress and mulberry also grow. These trees give hard temperate wood of high commercial value.

Animal Life

- This region inhabits a large number of domestic animals.
- Cattle, goats and pigs are found in large numbers.
- In Asian lands, where population is very dense, cattle rearing has not developed, but in Uruguay, Brazil and South Africa pastoral farming is an important occupation.
- Deer, wild bears and foxes are found in forests.

Human Life and Economic Development

- ✚ The Asian part of this region is densely populated.
- ✚ Here agriculture is the mainstay of the people.
- ✚ Rice is the principal crop and is cultivated in the warmer wet parts. Millet is another important crop. Production is insufficient to meet the ever-increasing demand.
- ✚ People are generally poor and have a very low standard of living. This is most characteristic of Central and Northern China.
- ✚ Japan, however, is an exception and is most developed country in the Asian part of this region. It has developed agriculture, fishing, mining and manufacturing. Iron and steel, cotton and silk textiles, chemicals, locomotive and ship building industries are well developed in Japan.

In other parts, the region is not so densely populated and there are large tracts of land available for cultivation. Here also agriculture is the main occupation. The important crops are maize, millets, pulses, rice, sugarcane, indigo, tobacco, cotton, camphor, banana, orange and coffee.

Mineral resources

China is awash with natural resources such as rare earth elements, aluminum, natural gas, tungsten, copper, petroleum, iron ore, and coal.

(C) WARM TEMPERATE REGIONS - STEPPE

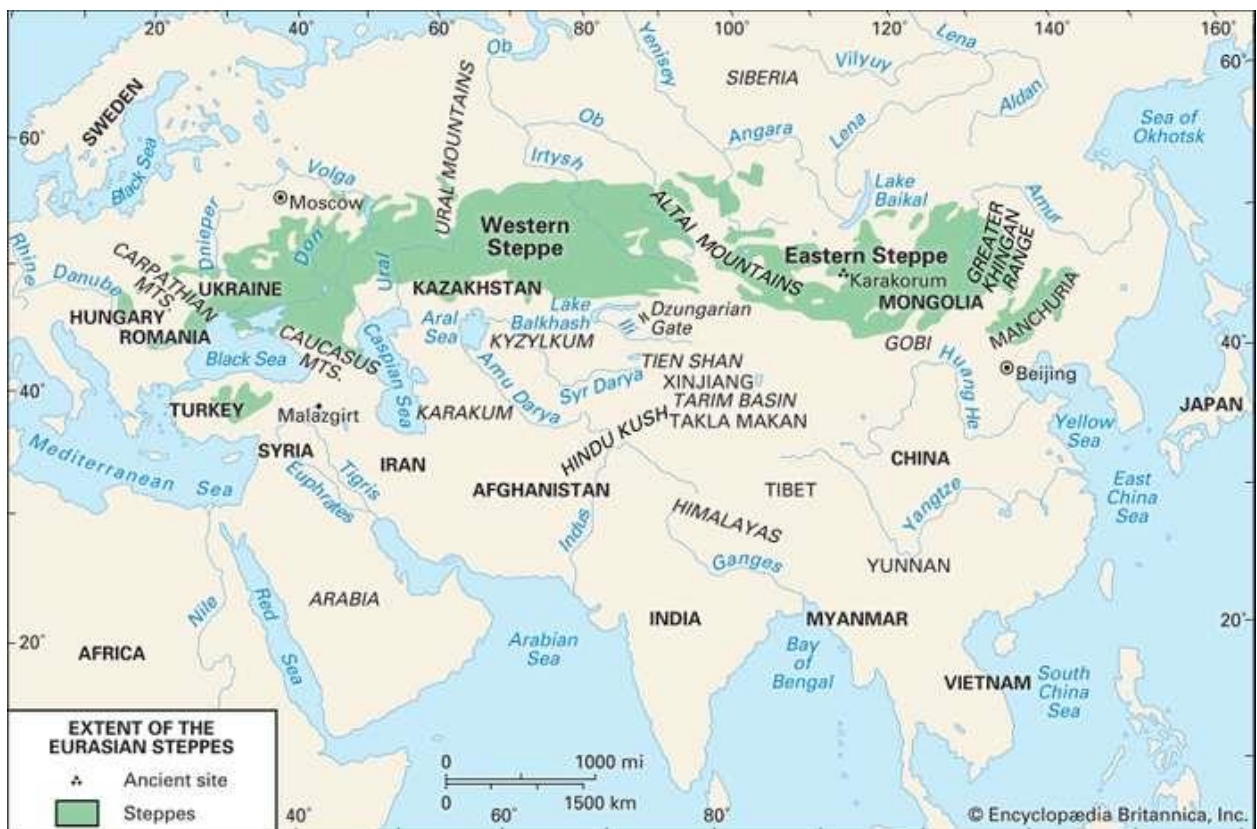
Location and extent:

40⁰ to 55⁰ latitude.

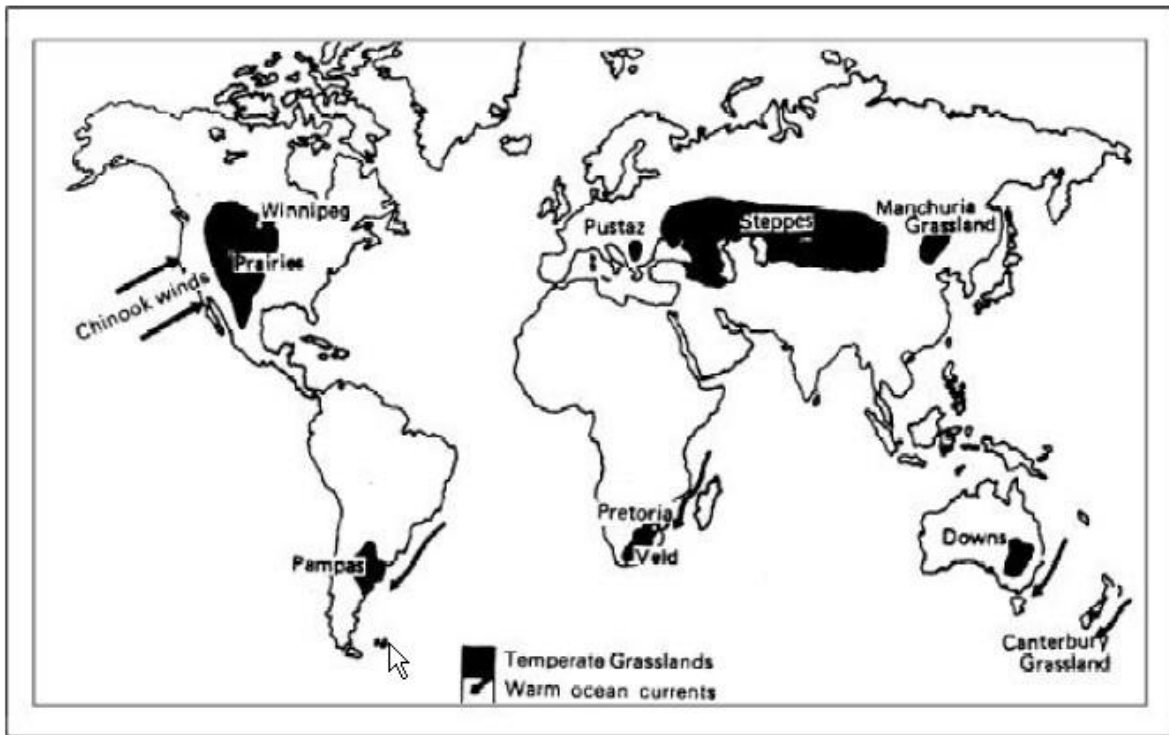
A steppe is a dry, grassy plain. Steppes occur in temperate climates, which lie between the tropics and polar regions. Temperate regions have distinct seasonal temperature changes, with cold winters and warm summers.

The world's largest steppe region, often referred to as "the Great Steppe", is found in Eastern Europe and Central Asia, and neighbouring countries stretching from Ukraine in the west through Russia, Kazakhstan, China, Turkmenistan and Uzbekistan to the Altai, Koppet Dag and Tian Shan ranges.

The Steppe, belt of grassland that extends some 5,000 miles (8,000 kilometres) from Hungary in the west through Ukraine and Central Asia to Manchuria in the east. Mountain ranges interrupt the steppe, dividing it into distinct segments; but horsemen could cross such barriers easily, so that steppe peoples could and did interact across the entire breadth of the Eurasian grassland throughout most of recorded history.



Cool Continental Climatic Region or Steppe Type



Eurasian Steppe

The largest temperate grassland in the world is the Eurasian steppe, extending from Hungary to China. It reaches almost one-fifth of the way around the Earth. The Eurasian steppe is so well-known, the area is sometimes referred to as just The Steppe.

The Eurasian steppe has historically been one of the most important routes for travel and trade. The flat expanse provides an ideal route between Asia and Europe. Caravans of horses, donkeys, and camels have traveled the Eurasian steppe for thousands of years. The most famous trade route on the Eurasian steppe is the Silk Road, connecting China, India, and Europe. The Silk Road was established around 200 BCE, and many Silk Road trade routes are still in use today.

During the 13th century, Mongolian leader Genghis Khan conquered almost the entire Eurasian steppe. With expert horsemen, Khan conquered territory from his home in what is now Mongolia, through China, Central Asia, and the land around the Caspian Sea.

The equestrian culture that was so important to Genghis Khan is still important for most cultures native to the Eurasian steppe. From the Mongolian tradition in the east to the Cossack traditions of western Russia, these cultures have relied on horses for travel, trade, and conquest on the vast steppe. To this day, many festivals and community activities focus on horseback riding.

Other Steppes

The dry, shortgrass prairie of North America's Great Plains is also a steppe. The shortgrass prairie lies on the western edge of the Great Plains, in the rain shadow of the Rocky Mountains. It extends from the U.S. state of Texas in the south to the province of Saskatchewan, Canada, in the north.

Many of the world's steppes have been converted to cropland and pasture. Short grasses that grow naturally on steppes provide grazing for cattle, goats, horses, camels, and sheep. Sometimes steppes are overgrazed, which occurs when there are more animals than the land can support.

When the short grasses of the steppe are plowed under for agriculture, the soil can erode very quickly. Important nutrients anchored in the soil by grasses are simply blown or washed away. Agricultural development can also degrade the soil with fertilizer and other chemicals. This is called overcultivation.

Overcultivation can make grasslands look like deserts. The soil cannot retain enough water or nutrients for vegetation to grow. True deserts, however, receive less rainfall (less than 25 centimeters per year) than steppes.

Distribution:

Bordering the deserts, away from the Mediterranean regions and in the interiors continents are the temperate grasslands. Though they lie in the Westerly wind belt, they are so remote from maritime influence that the grasslands are practically treeless. These grasslands are so distinctive in their natural vegetation that, although those which occur in the southern hemisphere have a much more moderate climate, they are often dealt with together. In the northern hemisphere, the grasslands are far more extensive and are entirely continental. In Eurasia, they are called the Steppes and stretch eastwards from the shores of the Black Sea across the Great Russian plain to the foothills of the Altai Mountains, a distance of well over 2,000 miles. There are isolated sections in the Pustaz of Hungary and the plains of Manchuria. In North America, the grasslands are also quite extensive and are called Prairies. They lie between the foothills of the Rockies and the Great Lakes astride the American Canadian border. In the case of the Pampas of Argentina and Uruguay, the grasslands extend right to the sea and enjoy much maritime influence. In South Africa, the grasslands are sandwiched between the Drakensberg and the Kalahari Desert; and are further subdivided into the more tropical Bushveld in the north, and the more temperate High Veld in the south.

Climate:

Grasslands (steppes) are temperate environments, with warm to hot summers and cool to very cold winters; temperatures are often extreme in these midcontinental areas. They are often located between temperate forests and deserts, and annual precipitation falls between the amounts characteristic of those zones. Winds play an important role in these very open environments. Precipitation varies from highly seasonal to spread throughout the year. There is a substantial snow buildup in the northern part of the zone, diminishing greatly to the south.

Temperature:

Their location in the heart of continents means that they have little maritime influence. Their climate is thus continental with extremes of temperature. Summers are very warm, over 19°C. Winters are very cold in the continental steppes of Eurasia because of the enormous distances from the nearest sea. The winter months are well below freezing. In contrast, the steppe type of climate in the southern hemisphere is never severe. The winters are mild. Temperatures below freezing point even in midwinter (July in the southern hemisphere) are exceptional.

Precipitation:

Steppes are semi-arid, meaning they receive 25 to 50 centimeters (10-20 inches) of rain each year. In its continental position, the annual precipitation of the Steppe Climate is light. The average rainfall may be taken as about 20 inches, but this again varies according to location from 10 inches to 30 inches. The maritime influence in the steppe type of climate of the southern hemisphere is even better brought out by the rainfall regime. Its annual precipitation is always more than the average 20 inches because of the warm ocean currents that wash the shores of the steppe-lands.

Soils

Grasslands are typically underlain by chernozems, soils that are alkaline because net water movement within them has been upward, carrying calcium with it that precipitates as calcium carbonate. Prairie chernozems are blackish in their upper horizons because of the constant decay of grasses into dark humus. Taller-grass prairies have browner soils, richer in humus and loamy in structure.

Natural Vegetation:

This is enough rain to support short grasses, but not enough for tall grasses or trees to grow. Many kinds of grasses grow on steppes, but few grow taller than half a meter (20 inches). The reference to steppe grassland is taken to mean the temperate grasslands of the mid-latitudes, the Steppes, Prairies, Pampas, Veld and Downs. The steppes are grass covered, differing only in the density and quality of the grass. Their greatest difference from the tropical savannah is that they are practically treeless and the grasses are much shorter. Where the rainfall is moderate, above 20 inches, the grasses are tall, fresh and nutritious and are better described as long prairie grass. The appearance of the temperate grasslands varies with seasons. Trees are very scarce in the steppes, because of the scanty rainfall, long droughts and severe winters. Grassland is largely dominated by grasses, but with annual and perennial forbs intermixed in different proportions in different areas. The average height of the grass is correlated with rainfall, so there are tall-, medium-, and short-grass prairie zones across a longitudinal gradient from east to west in North America. The aspect changes considerably between spring, when the grasses are green and the forbs are in bloom, and midsummer, when brown, seeding, and dying plants predominate. Some steppes, especially in more arid areas, are dominated by shrubs (they are designated as shrub-steppes) and differ from deserts primarily in their higher latitudes, lower mean temperatures, and lower diversity.

Animals

Big mammals of the Eurasian steppe were the Przewalski's horse, the saiga antelope, the Mongolian gazelle, the goitered gazelle, the wild Bactrian camel and the onager. The gray wolf and the corsac fox and occasionally the brown bear are predators roaming the steppe. A lot of the animals that live in Steppe are grazing animals, such as rabbits, mice, antelopes, horses, etc. Smaller animals have little defense from predators. Since it is such an open environment and predators can find animals fast, they either form herds or make burrows. There are many endangered animals on the Steppe. More and more people are trying to protect them. These grasses can support high densities of grazing animals, such as zebra, antelope and bison. And these herds in turn support iconic predators, including lions and cheetahs.

Human life and Economy:

The major centers of population and high culture in Eurasia are Europe, the Middle East, India and China. For some purposes it is useful to treat Greater Iran as a separate region. All these regions are connected by the Eurasian Steppe route which was an active predecessor

of the Silk Road. The latter started in the Guanzhong region of China and ran west along the Hexi Corridor to the Tarim Basin. From there it went southwest to Greater Iran and turned southeast to India or west to the Middle East and Europe. A minor branch went northwest along the great rivers and north of the Caspian Sea to the Black Sea. When faced with a rich caravan the steppe nomads could either rob it, or tax it, or hire themselves out as guards. Economically these three forms of taxation or parasitism amounted to the same thing. Trade was usually most vigorous when a strong empire controlled the steppe and reduced the number of petty chieftains preying on trade. The Silk Road first became significant and Chinese silk began reaching the Roman Empire about the time that the Emperor of Han pushed Chinese power west to the Tarim Basin.

Agriculture

The nomads would occasionally tolerate colonies of peasants on the steppe in the few areas where farming was possible. These were often captives who grew grain for their nomadic masters. Along the fringes there were areas that could be used for either plowland or grassland. These alternated between one and the other depending on the relative strength of the nomadic and agrarian heartlands. Over the last few hundred years, the Russian steppe and much of Inner Mongolia has been cultivated. The fact that most of the Russian steppe is not irrigated implies that it was maintained as grasslands as a result of the military strength of the nomads. The grasslands have been ploughed up for extensive, mechanized wheat cultivation and are now the 'granaries of the world'. Besides wheat, maize is increasingly cultivated in the warmer and wetter areas. The tufted grasses have been replaced by the more nutritious Lucerne or alfalfa grass.

Mineral resources

Vast mineral resources – coal, iron ore, gold, manganese, silver - Mining activity very high.

Reference Books:

1. Khanna, K.K. and Gupta, V.K., (1988), Economic and Commercial geography, Sultan Chand and Sons, New Delhi.
2. Goh Cheng Leong (1982), Human & Economic Geography, Oxford University Press, New York.

Mr. N. SARAVANA KUMAR
ASSISTANT PROFESSOR
P.G. & RESEARCH DEPARTMENT OF GEOGRAPHY
GOVERNMENT ARTS COLLEGE (AUTONOMOUS)
COIMBATORE – 641 018.